

REMARKS

In the Office Action dated February 24, 2006, claims 1-15 were rejected under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent No. 5,888,884 ("Wojnarowski"). In response, Applicant has amended the independent claims 1 and 10 to more clearly distinguish the claimed invention from the cited reference. As amended, Applicant respectfully asserts that the independent claims 1 and 10 are not anticipated by the cited reference of Wojnarowski, as explained below. In view of the claim amendments and the following remarks, Applicant respectfully requests the allowance of the pending claims 1-15.

A. Patentability of Amended Independent Claims 1 and 10

The Office Action has rejected the independent claims 1 and 10 under 35 U.S.C. §102(b) as allegedly being anticipated by Wojnarowski. However, as amended, the independent claim 1 recites the limitations of "*a layer of insulating material on said side surface, said layer of insulating material covering the entire said side surface,*" which are not disclosed in the cited reference of Wojnarowski. Thus, the amended independent 1 is not anticipated by Wojnarowski.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). As correctly stated on page 3 of the latest Office Action, the cited reference of Wojnarowski discloses a semiconductor structure (Fig. 8) comprising a semiconductor die (70) having "half-barrel shaped side surfaces." As illustrated in Figs. 1-7 and described in the specification of Wojnarowski, the half-barrel shaped side surfaces of the semiconductor structure are formed in the following manner. First, holes 50 are formed through a wafer 30 (See Fig. 2; column 6, lines 64-65). Next, an insulating coating 54 is formed on all exposed surfaces of the wafer 30, including the top surface 32, the bottom surface 34 and surfaces within the holes 50 (See Fig. 3; column 7, lines 16-18). Opening 56 are then formed in the insulating coating on the top surface 32 to provide access to top interconnection pads 40 (See Fig. 4; column 7, lines 29-31). Next, the wafer 30 is cleaned, backspattered and

metallized on both sides, forming metallization 60 (See Fig. 5; column 7, lines 37-41). Excess metal are then removed using patterned resist, leaving patterned metal 62 (See Fig. 6; column 7, lines 46-53). Next, the wafer 30 is sawed using a dicing saw such that each metallized hole 50 is divided in two, resulting in a half-barrel appearance (See Fig. 7; column 7, lines 54-65). As a result, for each divided "half-barrel" hole 50 on a side surface, one metallization 62 on a single layer of insulating material 54 is formed within the divided "half-barrel" hole. The different layers of insulating material 54 on the divided "half-barrel" holes do not cover the entire "half-barrel shaped" side surface of the semiconductor structure of Wojnarowski. Consequently, the cited reference of Wojnarowski does not disclose the limitations of "*a layer of insulating material on said side surface, said layer of insulating material covering the entire said side surface,*" as recited in the amended independent claim 1. Therefore, the amended independent claim 1 is not anticipated by the cited reference of Wojnarowski.

As amended, the independent claim 10 recites similar limitations as those addressed above with respect to the amended independent claim 1. Thus, the amended independent claim 10 is also not anticipated by the cited reference of Wojnarowski for the same reasons as the amended independent claim 1. Furthermore, the amended claim 10 recites the limitation of "*said side surface being a planar surface.*" As admitted by the Examiner, the cited reference of Wojnarowski discloses a semiconductor structure comprising a semiconductor dic having "half-barrel shaped side surfaces." Thus, the cited reference of Wojnarowski does not disclose the limitation of "*said side surface being a planar surface,*" which further supports the conclusion that the amended claim 10 is not anticipated by the cited reference of Wojnarowski.

B. Patentability of Dependent Claim 2-9 and 11-15


Each of the dependent claims 2-9 and 11-15 depends on one of the amended independent claims 1 and 10. As such, these dependent claims include all the limitations of their respective base claims. Therefore, Applicant submits that these dependent claims are allowable for at least the same reasons as their respective base claims.

Applicant respectfully requests reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

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